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ABSTRACT

This document presents a series of tables concerning a 1966 study of the Woodrow Wilson Fellows who entered graduate school from 1958 through 1963. At the time of the study, 49% of the fellows had not yet earned the doctorate, and were no longer in school. Among the men, 44% were defined as dropouts, and among the women, 64% were thus defined. Table I of the report shows both sex differences and discipline differences in the percentage of dropouts among the fellows; Table II shows the sex and discipline differences in attrition when second year financial support is taken into account; Table III shows the effect of parenthood on dropout rates for men and women by field; and Table IV shows the effect on sex and discipline differences in attrition when faculty rating of Woodrow Wilson Fellows are controlled. (Author/HS)

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SEX AND DISCIPLINE DIFFERENCES IN DOCTORAL ATTRITION

ED 077475

These data come from a secondary analysis of Mooney's 1966 study of the Woodrow Wilson Fellows who entered graduate school from 1958 through 1963. The Fellows were selected by professors while still seniors in college, for special promise in a career of college teaching. Because of the method of their selection, they represent a biased sample of some of the best graduate students in their entering class. Other things being equal, attrition rates should be lower among Woodrow Wilson Fellows than in the total population of graduate students. At the time of the study, 49% of the Fellows had not yet earned the doctorate, and were no longer in school. Among the men, 44% were thus defined as dropouts, and among the women, 64% were thus defined. There is a sex difference in dropouts of twenty percentage points.

Table I shows both sex differences and discipline differences in the percentage of dropouts among the Woodrow Wilson Fellows. The sex differences can be read across the rows, and the discipline differences down the columns. Within the Humanities, there is a small, but statistically significant, difference in the percentage of dropouts in English and Philosophy, six percentage points. The difference between English and all other Humanities is larger, twelve percentage points. Within the Social Sciences, there is a difference of fourteen percentage points in dropouts between History Fellows and Psychology Fellows. Within the Physical Sciences, there is a difference of twelve percentage points between students in Mathematics and Chemistry.

In the Humanities, the sex difference is fourteen percentage points. In the Social Sciences, it is eighteen percentage points, and in the Physical Sciences, it is twenty-eight percentage points. It is interesting to note that while the dropout rate is lower for women in the Physical Sciences than in the Humanities, the magnitude of the sex differences increases as we look from the Humanities to Social Sciences to Physical Sciences.

Table II shows the sex and discipline differences in attrition when second year financial support is taken into account. Among those with no financial support during the second year of graduate school, the original sex difference of twenty percentage points remains. Among those with any second year financial support, the sex difference is reduced to nine percentage points. For men, the effect of second year support is to reduce dropouts by fourteen percentage points. For women, the effect is to reduce dropouts by twenty-six percentage points. The effect of second year support is even more dramatic when field is controlled. It makes a difference of twenty-nine percentage points among women in the Humanities, and forty percentage points among women in the Physical Sciences.

Table III shows the effect of parenthood on dropout rates for men and women, by field. For men, regardless of field, having children makes no statistically significant difference. For women, having children makes a difference of thirteen percentage points in the Humanities, eleven in the Social Sciences, and thirty-one in the Physical Sciences. Unfortunately, it is not possible to infer from the table whether women drop out of graduate school because they have babies, or whether they have babies as a face-saving alternative to trying to succeed in a discriminatory graduate system.

Table IV shows the effect on sex and disciplin differences in attrition when faculty rating of Woodrow Wilson Fellows was controlled. The assumption was that in a pure meritocracy, where talent and willingness to work are the primary determinants of "success," dropout rates would be low among those who were rated "Excellent" and high among those who were rated "Average to Dreadful."

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In fact, the zero-order difference of twenty percentage points is specified, rather than being interpreted, in the Lazarsfeld sense. When graduate rating is controlled, the sex difference increases to twenty-six points among the excellent students. When field is also controlled, it increases to thirty-eight points among the "Excellent" students in the Physical Sciences.

Clearly, something besides meritocracy was operating on the careers of Woodrow Wilson Fellows in the early sixties. Research is needed to isolate the factors which are still operating differently on men and women, and the factors which have changed in the past decade.

The tables point to three fruitful areas for further research. First is the complex relationship between financial support and reduction in dropouts. Second is the relationship between parenthood and dropouts. Third is the relationship between faculty rating of students, and their performance.

TABLE I

WOODROW WILSON FELLOWS, 1958-1963
% DROPOUTS BY SEX AND DISCIPLINE

	Men	Women	Sex Difference	Total
Humanities				
English	51% (886)	68% (633)	E = 17	58% (1519)
Modern Languages	51% (345)	59% (308)	E = 8 NS	55% (653)
Classics	51% (124)	57% (56)	E = 6 NS	53% (180)
Philosophy	50% (381)	63% (63)	E = 13 NS	52% (444)
Other Humanities	64% (230)	79% (132)	E = 15	70% (362)
Total Humanities	52% (1966)	66% (1192)	E = 14	58% (3158)
Social Sciences				
History	48% (726)	69% (251)	E = 21	53% (977)
Political Science	48% (413)	73% (115)	E = 25	53% (528)
Economics	52% (324)	59% (49)	E = 7 NS	53% (373)
Anthropology	46% (92)	60% (45)	E = 14 NS	50% (137)
Sociology	44% (90)	55% (56)	E = 11 NS	49% (146)
Psychology	32% (159)	51% (85)	E = 19	39% (244)
Other Social Sciences	42% (319)	67% (66)	E = 25	46% (385)
Total Social Sciences	46% (2123)	64% (667)	E = 18	51% (2790
Physical Sciences				
Mathematics	31% (479)	54% (56)	E = 23	34% (535)
Physics	26% (428)	70% (47)	E = 44	31% (475)
Biological Sciences	20% (112)	36% (69)	E = 16	26% (181)
Chemistry	14% (208)	58% (50)	E = 44	22% (258)
Other Physical Sciences	31% (67)	70% (19)	E = 31	41% (86)
Total Physical Sciences	26% (1294)	54% (241)	E = 28	30% (1535)
Total Woodrow Wilson Fellows	44% (5383)	64% (2100)	E = 20	49% (7483)
Field Difference	E = 26	E = 12		E = 28

TABLE II

WOODROW WILSON FELLOWS, 1958-1963
% DROPOUTS BY SEX, FIELD, AND SECOND YEAR SUPPORT

	No Support			Any Support			Support Effect	
	Men	Women	Sex Effect	Men	Women	Sex Effect	Men	Women
Humanities	57% (1357)	72% (947)	E = 15	43% (609)	43% (245)	E = 0 N S	E = 14	E = 29
Social Sciences	51% (1331)	69% (484)	E = 18	38% (792)	52% (183)	E = 14	E = 13	E = 17
Physical Sciences	33% (758)	66% (169)	E = 33	16% (536)	26% (72)	E = 10 N S	E = 17	E = 40
Field Effect	E = 24	E = 6 N S		E = 27	E = 17			
Total Woodrow Wilson Fellows	49% (3428)	70% (1599)	E = 21	35% (1887)	44% (500)	E = 9	E = 14	E = 26

TABLE III

WOODROW WILSON FELLOWS: 1958-1963
% DROPOUTS BY SEX, FIELD, AND PARENTHOOD

	No Children			Any Children			Parenthood Effect	
	Men	Women	Sex Effect	Men	Women	Sex Effect	Men	Women
Humanities	52% (1677)	64% (1042)	E = 12	54% (289)	77% (150)	E = 23	E = 2 N S	E = 13
Social Sciences	46% (1776)	63% (571)	E = 17	49% (347)	74% (96)	E = 25	E = 3 N S	E = 11
Physical Sciences	26% (1117)	49% (197)	E = 23	27% (177)	80% (44)	E = 53	E = 1 N S	E = 31
Field Effect	E = 26	E = 15		E = 27	E = 6 N S			
Total Woodrow Wilson Fellows	43% (4570)	62% (1810)	E = 19	46% (813)	77% (290)	E = 31	E = 3 N S	E = 15

THE ORIGINAL MOONEY DATA WERE OBTAINED FOR SECONDARY ANALYSIS BY PERMISSION OF MRS. JANET MITCHELL, DIRECTOR OF THE WOODROW WILSON DISSERTATION FELLOWSHIP PROGRAM.

THE NUMBER IN PARENTHESIS IS THE TOTAL NUMBER OF CASES ON WHICH THE PERCENTAGE IS BASED. UNDERLINED VALUES OF EPSILON (E) ARE STATISTICALLY SIGNIFICANT AT THE .05 LEVEL, USING A CONSERVATIVE ESTIMATE AND A TWO TAILED TEST.

TABLE IV

% DROPOUTS AMONG WOODROW WILSON FELLOWS, BY FIELD, SEX, AND GRADUATE RATING

	HUMANITIES			SOCIAL SCIENCES			PHYSICAL SCIENCES			TOTAL		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
EXCELLENT	42% (265)	63% (144)	49% (409)	39% (341)	54% (78)	42% (419)	12% (254)	50% (48)	18% (302)	32% (860)	58% (270)	38% (1130)
	E = 21			E = 15			E = 38			E = 26		
VERY GOOD	54% (227)	65% (130)	58% (357)	47% (286)	75% (107)	55% (393)	23% (164)	50% (34)	28% (198)	44% (677)	67% (271)	50% (948)
	E = 15			E = 28			E = 27			E = 23		
AVERAGE TO DREADFUL	67% (168)	85% (99)	74% (267)	61% (182)	77% (52)	65% (234)	51% (105)	67% (24)	54% (129)	61% (455)	80% (175)	66% (630)
	E = 18			E = 16			E = 16 N S			E = 19		
TOTAL OF THOSE WITH GRADUATE RATINGS	52% (660)	69% (373)	58% (1033)	47% (809)	68% (237)	52% (1046)	23% (523)	54% (106)	28% (629)	42% (1992)	67% (716)	49% (2708)
	E = 17			E = 21			E = 31			E = 25		
GRADUATE RATING EFFECT WITHIN FIELD: E =	-25	-22	-25	-22	-23	-23	-39	-17	-36	-29	-22	-28

FIELD EFFECT WITHIN GRADUATE RATINGS:

EXCELLENT	E = 30 AMONG THE MEN	E = 13 AMONG THE WOMEN	E = 31 AMONG TOTAL
VERY GOOD	E = 31 AMONG THE MEN	E = 15 AMONG THE WOMEN	E = 30 AMONG TOTAL
AVERAGE TO DREADFUL	E = 16 AMONG THE MEN	E = 18 AMONG THE WOMEN	E = 20 AMONG TOTAL
TOTAL	E = 29 AMONG THE MEN	E = 15 AMONG THE WOMEN	E = 38 AMONG TOTAL

NOTE THAT FIELD EFFECTS WITHIN GRADUATE RATINGS ARE NOT STATISTICALLY SIGNIFICANT AMONG THE WOMEN BECAUSE THERE ARE SO FEW WOMEN IN EACH CELL IN THE PHYSICAL SCIENCES.